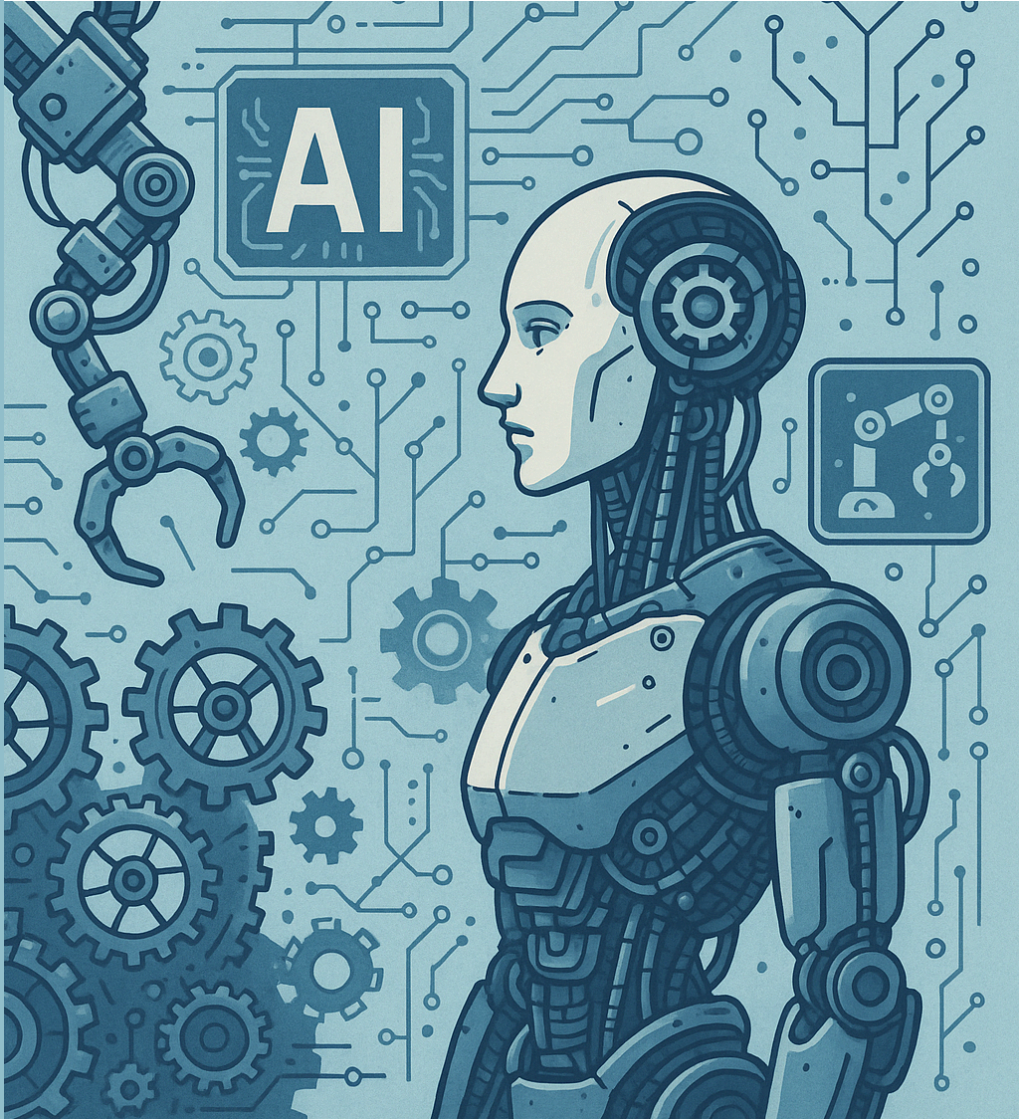




**INSTITUTION'S  
INNOVATION  
COUNCIL**  
(Ministry of HRD Initiative)



**AAA+**  
**CAREERS360**



# MECH CONNECT

**Department Magazine A:Y: 2022-23**



## **Secretary and Correspondent's message**

**It's my pleasure to invite you to this campus, which is abundantly endowed by nature and sufficiently enriched with our abiding commitment to quality and values. I am sure it will be a pleasant and enlightening experience for you to explore the treasures for yourself.**

## **Managing Director's message**

**we from RCE thrive every day in providing the highest quality education, placements and skill sets for our students, which go in parallel with a fastmoving enironment**

## **Principal's message**

**It is my pleasure to express about your study for a career at RCE. A unique place with state-of-the-art infrastructure and equipment on cutting-edge technologies with knowledge transfer by experienced faculty and technical staff. Having chosen to study at RCE, It will make you competent in advanced technologies along with scheduled training programs throughout the course. The present era of technical careers focuses on multi-disciplinary activities which makes the identity of one's career. So, I promise the above are fulfilled at RCE. I welcome you all, to this distinguished campus to transform your lives.**



## INSTITUTE VISION

To emerge as a “Centre of excellence” offering high quality Technical Education and Research Opportunities to learners and also develop complete personality of graduates with good communication, discipline, lifelong learning, leadership qualities, ethics and global standards there by making them professionally deft and intellectually adept to contribute for the advancement of environment and society.

## INSTITUTE MISSION

- To impart high quality technical education by providing the state-of-the art infrastructure, core instruction and well experienced and qualified faculty.
- To develop highly motivated engineering professionals with good knowledge, communication skills, human and ethical values, requisite skills and competence.
- To produce highly successful graduates who can contribute to the profession to resolve the societal and environmental issues in the society.



## **DEPARTMENT VISION**

To become a centre of excellence in the field of Mechanical Engineering by providing quality technical education and research to learners and solve social and environmental problems by developing innovative and creative skills in them and make the graduates employable along with lifelong learning, leadership and entrepreneurial skills.

## **DEPARTMENT MISSION**

To provide a platform to the aspiring mechanical engineers to attain quality education by utilizing the state of art Infrastructure, Innovative teaching methods and eminent faculty. To empower students with innovative and research skills to attain opportunities in Mechanical Engineering field and be solution providers with a lifelong learning attitude. To equip the learners with a sense of ethical and professional responsibilities towards society and environment along with leadership and entrepreneurial skills.



## DEPARTMENT PEO'S

- PEO-1: Gain the knowledge of principles in applied and basic engineering sciences which are necessary to formulate and solve problems related to Mechanical Engineering.
- PEO-2: Apply analysis, design, optimization and implementation skills in order to formulate and solve Mechanical Engineering problems.
- PEO-3: Develop the latest skills in cutting edge technologies and modern tools to simulate the real time problems without experimentation.
- PEO-4: Develop their managerial and Entrepreneur skills, Ethical and Professional skills and Art of multi-disciplinary approach and team work to solve the problems of industry and society.
- PEO-5: Recognize the needs of the future world of science & technology especially Mechanical Engineering and engage themselves in lifelong learning and research.

## DEPARTMENT PSO'S

### U.G PSOs

- PSO-1: An ability to analyze, design and evaluate mechanical components and systems using state-of-the-art software tools needed for Mechanical Engineers as demanded by the industries from time to time.
- PSO-2: An ability to work in operation and Maintenance plants of manufacturing and other sectors
- PSO-3: Imbibing confidence to design, redesign, produce and reproduce the Mechanical Engineering components at any scale

### P.G PSOs

- PSO 1 : Prepare process sheets and working drawings to manufacture a machine element.
- PSO 2 : Model, simulate, analyze and optimize mechanical systems / processes through application of software.



## DEPARTMENT PO'S

### PO NO

### PROGRAM OUTCOME

- PO-1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and Engineering specializations to the solution of complex engineering problems.
- PO-2 Problem Analysis:** Identify, Formulate, review research literature and analyze complex engineering problems to arrive at substantiated conclusions using first principles of mathematics, natural and engineering sciences.
- PO-3 Design/Development of Solutions:** Design solutions for complex engineering problems and design system components, processes to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO-4 Conduct Investigations of Complex Problems:** Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO-5 Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with and understanding of the limitations.
- PO-6 The Engineer and Society:** Apply Reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
- PO-7 Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development
- PO-8 Ethics:** Apply Ethical Principles and commit to professional ethics and responsibilities and norms of the engineering practice
- PO-9 Individual and Team Work:** Function effectively as an individual and as a member or leader in teams and in multidisciplinary Settings
- PO-10 Communication:** Communicate effectively with the engineering community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.
- PO-11 Project Management and Finance:** Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments.
- PO-12 Life-Long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.





## ABOUT RCEE

The Founders of RATNAM EDUCATIONAL INSTITUTIONS of Nellore, Committed to excellence established Ramachandra College of Engineering in Eluru. RCE, is approved by AICTE and affiliated to JNTU Kakinada. The institute boasts of the State-of the Art facilities, well built infrastructure and a serene lush green naturally landscaped sprawling campus far from the hustle and bustle of the town, providing congenial environment for learning. RCE has a team of highly experienced, well qualified and dedicated faculty members in all disciplines. In addition, RCE organizes guest lectures by eminent professors, experts from industry to the students in their respective areas of specialization .The aim of RCE is to attain national prominence providing outstanding education in the field of computing for their productive careers in industry, academia, and government. The institute boasts in the state of the art facilities. Right from the inception the institute is attaining High pass percentage of above 60% with majority of them securing distinctions. The institute is aiming to implement e-Learning in the campus. The institute has signed MOUs with Various Multinational company's like TATA , Reliance HR solutions etc which helps the students to visit the Industries and get practical experience. Every department in the institute has Technology forums & hobby clubs for students for knowledge transfer. To strike the balance between knowledge is power and health is wealth excellent facilities with standards for all kinds of indoor & outdoor games & sports with trainers are made available for the students.





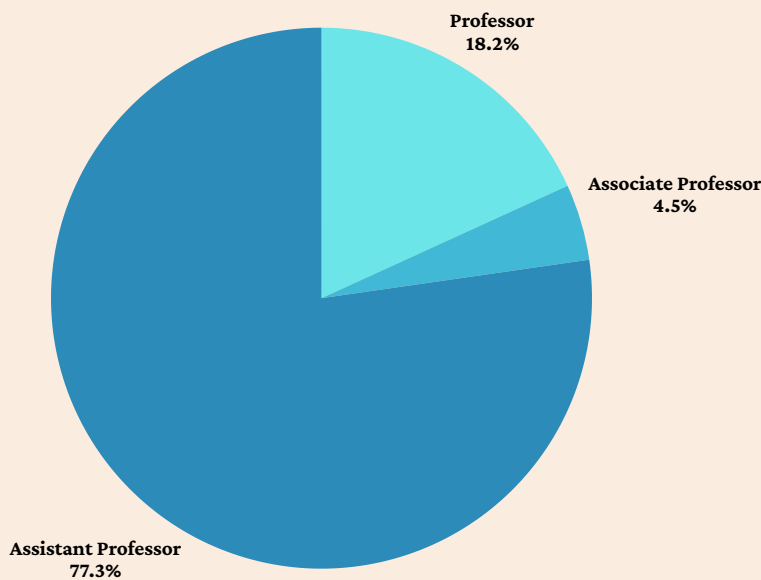
## ABOUT DEPARTMENT

Welcome to the Department of Mechanical Engineering at RCEE. We began our voyage in the middle of 2011 with the intake of 60 seats and it was enhanced to 120 seats in the year 2012. The Department pursues expertise based designing educational programs surrounded by JNTUK and essential focal point of the educational program is to grant specialized ability to understudies with hands-on preparation in the research centers, advance their critical thinking aptitudes and development of new innovations. The Department keeps up dynamic research by urging workforce and understudies to complete synergistic and interdisciplinary research. Department has given chances to both faculty and understudies to embrace innovative improvements and the department keeps up dynamic research by urging workforce and understudies with utmost dedication. Subsidizing from different Government/Non Government bodies helps us to explore. Our Department contributes in tackling the mechanical difficulties of the general public and I urge you to investigate our site for further subtleties.



# OUR DEPARTMENT FACULTY MEMBERS

NAME	DESIGNATION
1.Dr. M. Muralidhara Rao[M.Tech,Ph.d]	Principal & Professor
2. Dr. Bazani Shaik [M.Tech,Ph.d]	HOD& professor
3.Mr.B.Sudhakara Rao [M.Tech,(Ph.d)]	Associate professor
4.Dr. Raffi Mohammed [M.Tech,Ph.d]	Professor
5.Dr.K.Anand Babu [M.Tech,Ph.d]	professor
6.Mr. G. V. Phani Babu [M.Tech ]	Assistant professor
7.Mr.KPVSR Vinay Kumar [M.Tech]	Assistant professor
8. Mr. G. Chitti Babu [M.Tech,(Ph.d)]	Assistant professor
9.Mr. A. Rahul Kumar [M.Tech,(Ph.d)]	Assistant professor
10. Mr. J. Srikanth [M.Tech,(Ph.d)]	Assistant professor
11.Mr. K. Bhavanarayana [M.Tech,(Ph.d)]	Assistant professor
12. Mrs. P. Lakshmi kala [M.Tech ]	Assistant professor
13. Mr. Y. Hemanth [M.Tech ]	Assistant professor
14. Mr. M.Vimal Teja [M.Tech ]	Assistant professor
15. Mrs. P. Naga Sravani [M.Tech ]	Assistant professor
16. Mr. S. Suneel Kumar [M.Tech ]	Assistant professor
17.Mr. B. Naga Babu [M.Tech ]	Assistant professor
18. Mrs. B. Devi Priyanka [M.Tech ]	Assistant professor
19. Mr. SK. Meeravali [M.Tech ]	Assistant professor
20. Mr. CH. Phani Kumar [M.Tech ]	Assistant professor
21. Mrs. O. Pavitra [M.Tech ]	Assistant professor
22. Mr. K. Ravindranath[M.Tech ]	Assistant professor





# MECHANICAL ENGINEERING LABS



ENGINEERING WORKSHOP



COMPUTER AIDED MANUFACTURING LAB



MECHANICS OF SOLIDS LAB



METALLURGY AND MATERIAL SCIENCE LAB



MACHINE TOOLS LAB



COMPUTER AIDED DRAFTING LAB



FLUID MECHANICS AND HYDRAULICS MACHINERY LAB



THEORY OF MACHINES LAB





**THERMAL ENGINEERING LAB**



**DYNAMICS OF MACHINERY LAB**



**METROLOGY & INSTRUMENTATION LAB**



**3D-PRINTING LAB**



**HEAT TRANSFER LAB**

**WELL EQUIPPED WITH  
ADVANCED  
LABS**





## **Faculty Publications in National and International Journals**

The Department of Mechanical Engineering has made significant strides in academic research during the academic year 2022–2023, with faculty members actively publishing their research in reputed journals across national and international platforms. A total of 25 research papers were published in journals indexed in Scopus, Science Citation Index (SCI), and UGC Care, reflecting the high standards and global relevance of the department's research output.

Key contributors include Dr. Bazani Sahik, Dr. V. Srinivasa Rao, Mr. J. Srikanth, Mr. M. Vimal Teja, Mr. B. Sudhakara Rao, Mr. A. Rahul Kumar, along with all other dedicated faculty members of the department. Their research encompasses a wide range of mechanical engineering domains such as advanced manufacturing processes, additive manufacturing, computational fluid dynamics (CFD), heat transfer analysis, renewable energy systems, smart materials, vibration analysis, robotics, and automation.

These publications not only contribute to academic enrichment but also enhance the department's research culture and reputation. Many of the papers were presented at prestigious conferences before being published, thereby providing faculty and students exposure to global academic trends and collaborative opportunities. The department continues to encourage faculty to pursue high-impact research and supports interdisciplinary collaboration, promoting a vibrant and innovative academic environment.

The department firmly believes that a strong research foundation is essential for academic excellence and societal impact. Faculty members not only engage in individual research but also mentor students in research-oriented projects, fostering a culture of innovation and inquiry at the undergraduate and postgraduate levels. Several publications during the year were the result of collaborative efforts between faculty and students, highlighting the emphasis on experiential learning and hands-on research.



## **Faculty Patent Publications**

The Department of Mechanical Engineering continues to foster a culture of innovation and technology development through active engagement in intellectual property generation. In the academic year 2022–2023, the department recorded a significant achievement with the publication of six patents by faculty members Dr. Bazani Shaik, Mr. M. Vimal Teja, Mr. K. Bhavanarayana, and Mr. B. Sudhakara Rao. These patents span diverse areas such as smart agricultural equipment, automated material handling systems, energy-efficient thermal devices, innovative cooling systems, and mechanical automation for industrial processes.

The patents are the outcome of rigorous research, prototype development, and problem-solving approaches tailored to address both industrial and societal needs. Some of the innovations are interdisciplinary in nature, combining mechanical design with electronics, automation, and sustainability concepts. These efforts underscore the department's emphasis on practical innovation, encouraging faculty and students alike to work on real-world challenges.

The patent filings also serve as a foundation for potential technology transfer, startup incubation, and future industry collaborations, aligning with national initiatives like Make in India and Atmanirbhar Bharat. The department provides necessary support through its R&D cell and encourages faculty members to explore government funding schemes such as MSME, AICTE-RPS, and DST-SEED to further develop and commercialize their innovations.



## **Faculty Patent Publications**

In a significant academic accomplishment, Dr. Bazani Shaik, Professor and Head of the Department of Mechanical Engineering, published two distinguished book chapters during the academic year 2022–2023 in internationally recognized book volumes. These chapters reflect his in-depth research expertise in advanced materials, manufacturing science, and emerging technologies, and contribute to the global knowledge pool in mechanical engineering.

The first chapter, titled “Parameters of Microstructural Investigations for Novel Materials”, provides a comprehensive overview of metallurgical and microstructural analysis techniques such as SEM, TEM, XRD, and EDS, applied to emerging classes of smart and composite materials. This chapter critically examines how microstructure influences material behavior under various mechanical and thermal conditions, serving as a valuable resource for researchers working on next-generation materials and nanostructures.

The second chapter, titled “Recent Advances in Material, Manufacturing, and Machine Learning”, explores the integration of machine learning algorithms with manufacturing processes such as additive manufacturing, machining, and material selection. It discusses the role of data-driven decision-making in process optimization, defect prediction, and performance analysis. This interdisciplinary work bridges traditional mechanical engineering with Industry 4.0 concepts, promoting intelligent manufacturing systems.

Both chapters were published by reputed international publishers and are indexed in leading academic databases such as Scopus and Web of Science, enhancing the academic visibility and global impact of the department.



# Drone Pilot Training under NEWGENIEDC

As part of promoting innovation, skill development, and entrepreneurship among students, the Department of Mechanical Engineering successfully conducted a Drone Pilot Training Program under the support of the New Generation Innovation and Entrepreneurship Development Centre (NewGen IEDC) during the academic year.



Approved by AICTE, New Delhi & Permanently Affiliated to JNTUK, Kakinada  
Accredited by NAAC & NBA

**NEWGENIEDC -RCE**

Organising  
A Workshop on  
**Drone Pilot Training**

14<sup>th</sup> -17<sup>th</sup> February, 2023



in association





# #KREYA23



A THREE DAY NATIONAL LEVEL TECHNICAL FEST



Trust Us  
We Run  
The World



6

WINNERS



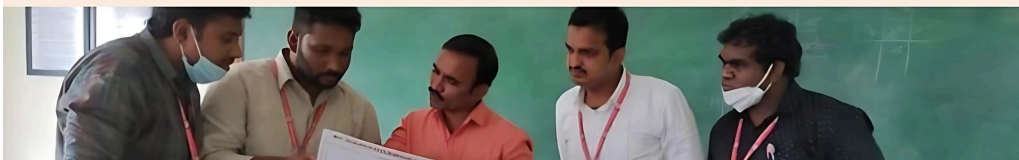
3

EVENTS



100+

PARTICIPANTS





# KREYA 2K23

PROJECT EXPO



200+  
PARTICIPANTS

**BIGGEST TECH  
EVENT**

50+  
PROJECTS

3 WINNERS





# FINAL YEAR PROJECTS







**5 NO'S**

**4 NO'S**

**4 NO'S**

**1 NO**

**2 NO'S**

**1 NO**

**2 NO'S**

**AUTOMATION  
DOMAIN**

**COMPOSITE  
MATERIALS  
DOMAIN**

**ROBOTICS  
DOMAIN**

**AUTOMOBILE  
DOMAIN**

**BIO-FUEL  
DOMAIN**

**RENEWABLE  
ENERGY SOURCES  
DOMAIN**

**MECHATRONICS  
DOMAIN**



# Placements



**3.6**  
LPA



**Y.MADHU**



**B.LOKESH**



**T.NAVEEN**



**S.O.DHARMENDRA**



**N.ANANTH KUMAR**



**4.5**  
LPA

**RAAM**  
GROUP

**2.4**  
LPA



**G.DILEEP**



**T.H.V.KRISHNA**



**P.SRINADH**



**M.SAI KUMAR**



**D.GANESH**



**P.NAVEEN**



**1.7**  
LPA

**WUOSU** INDIA

**56**  
**STUDENTS**

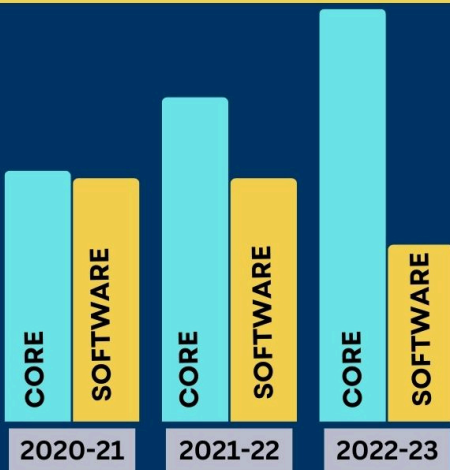
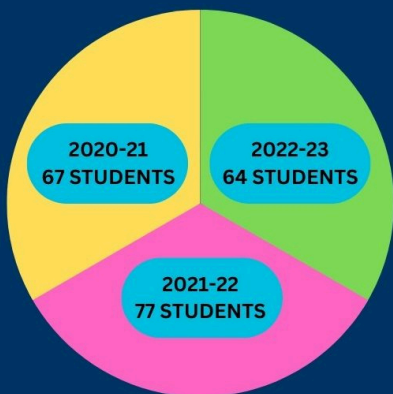


**Teleperformance**

**2.4**  
LPA



## PAST 3 YEARS PLACEMENTS





# Top Performers of the Year

## A.Y: 2022-23 ODD SEM

### I YEAR I SEM

I TOPPER	22ME1A0315	K. SATISH BABU	8.08 SGPA
II TOPPER	22ME1A0332	S.L.L.A.MANIKANTA	7.69 SGPA
III TOPPER	22ME1A0322	M. SANDEEP	7.08 SGPA

### II YEAR III SEM

I TOPPER	21ME1A0318	P. VIJAY BABU	7.85 SGPA
II TOPPER	21ME1A0304	B. DHANUSH	7.38 SGPA
III TOPPER	21ME1A0322	R.SUNIL	6.77 SGPA

### III YEAR I SEM

I TOPPER	20ME1A0305	BUDIDHA LOKESH	7.38 SGPA
II TOPPER	20ME1A0327	M.G.V.P.SAI	7.23 SGPA
III TOPPER	20ME1A0344	SK.IMRAN BASHA	7.08 SGPA

### IV YEAR I SEM

I TOPPER	19ME1A0301	A.JAGADEESH	8.66 SGPA
II TOPPER	19ME1A0354	M.T.V.SAI	8.03 SGPA
III TOPPER	19ME1A0313	CH.D.S.PAVAN	7.95 SGPA



# HIGHLIGHTS OF RCE

- PART OF 15 YEARS OLD EXCEPTIONAL EDUCATION LEGACY OF RCE
- OUTSTANDING RECORD OF PLACEMENTS
- POOL OF ILLUSTRIOUS FACULTY WITH 27 DOCTORATES
- ENTREPRENEURIAL SENSITIZATION WITH THE SUPPORT OF DST, GOVT OF INDIA
- STRONG AND RESOURCEFUL NETWORK OF ALUMNI
- FOCUS ON ALL ROUND DEVELOPMENT BY CO CURRICULAR AND EXTRACURRICULAR ACTIVITIES, STUDENTS PERFORM EXCEPTIONALLY WELL IN INTER AND INTRA COLLEGE COMPETITIONS.
- SCINTILLATING SPORTS FACILITIES WITH CRICKET GROUND, FOOTBALL GROUND, VOLLEYBALL COURT AND MANY INDOOR SPORTS.
- APPROVED BUSINESS INCUBATION CENTRE BY MSME, GOVT. OF INDIA.
- ACCREDITED BY NBA & NAAC.
- AWARDED FOR EDUCATION EXCELLENCE, INDUSTRY INTERACTION AND PLACEMENTS.
- STRONG FOCUS ON TECHNICAL AND SOFT SKILLS TRAINING, ENHANCING EMPLOYABILITY OF STUDENTS.
- TECHNOLOGY BASED INDUSTRIAL COLLABORATION VIA CENTRE OF EXCELLENCE, DASSAULT SYSTEMS.
- REGULAR EXPERT TALKS, NATIONAL & INTERNATIONAL SEMINARS, CONFERENCES WITH RENOWNED SPEAKERS FROM INDUSTRY AND ACADEMIA.
- THE ONLY PRIVATE INSTITUTE IN WHOLE ELURU DISTRICT TO RECEIVE NEW GENERATION INNOVATION & ENTREPRENEURSHIP DEVELOPMENT CENTRE SUPPORTED BY DST, GOVT OF INDIA
- RCE IS RECOGNIZED IN THE BAND PROMISING UNDER THE CATEGORY COLLEGE/ INSTITUTES (PRIVATE/SELF FINANCED)(TECHNICAL) IN ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENT ( ARIIA) ANNOUNCED BY THE MINISTRY OF EDUCATION GOVERNMENT OF INDIA.
- RCE-STUDENT R&D FACILITATION CENTRE SUPPORTS TO TURN STUDENTS IN TO INNOVATOR AND ENTREPRENEUR



# WHY MECHANICAL

**Innovation and Technological Advancement:** Mechanical engineering is at the forefront of technological innovation and advancement. It encompasses various fields such as robotics, automation, materials science, thermodynamics, and fluid mechanics. Mechanical engineers develop new technologies, improve existing systems, and drive innovation in industries like automotive, aerospace, energy, manufacturing, and many others.

**Design and Manufacturing:** Mechanical engineers are responsible for designing and manufacturing a wide range of products, from small consumer goods to large-scale industrial machinery. Their knowledge of mechanics, materials, and production processes enables them to create efficient, reliable, and cost-effective designs.

**Energy and Sustainability:** Mechanical engineers play a critical role in addressing global energy challenges and promoting sustainability. They design and optimize energy systems, including renewable energy technologies, such as wind turbines and solar panels.

**Infrastructure Development:** Mechanical engineers are involved in the design, construction, and maintenance of infrastructure projects like bridges, buildings, tunnels, and transportation networks. They ensure that these structures are safe, durable, and functional.

**Interdisciplinary Collaboration:** Mechanical engineering is a versatile field that often requires collaboration with professionals from various disciplines. Mechanical engineers work closely with electrical engineers, computer scientists, civil engineers, and other specialists to develop complex systems and integrated technologies.

**Job Opportunities and Economic Growth:** Mechanical engineering offers a wide range of career opportunities. Graduates can work in diverse industries, including automotive, aerospace, energy, manufacturing, biomedical, consulting, and research. The demand for skilled mechanical engineers is consistently high, both in developed and emerging economies. The growth of the mechanical engineering sector contributes to job creation, economic stability, and technological progress.



# MECHANICAL ENGINEERING CAREER PERSPECTIVES

## GOVT JOBS



सेंट्रल इलेक्ट्रॉनिक्स लिमिटेड  
CENTRAL ELECTRONICS LTD.

INDIAN ENGINEERING  
SERVICES



Braithwaite & Co. Limited

(A Govt. of India Undertaking)  
Ministry of Railways



सेल SAIL



## CORE JOBS



Mahindra



Reliance  
Industries Limited



## SOFTWARE JOBS



The Next Applied



Navigate your next



## HIGHER STUDIES

M-TECH

M.S

MBA

JRF

ETC.,



# CAMPUS LIFE



●○○  
XIAOMI 11i | GOWTHAM





## **Faculty Members**



**Dr. Bazani Shaik**  
**Professor**  
**Editor In Chief**



**Mr. B. Sudhakara Rao**  
**Associate Professor**  
**Editor**



**Dr. Raffi Mohammad**  
**Professor**  
**Editor**

## **Student Members**



**Mr. M. T. V. Sai**  
**19ME1A0354**  
**Final Year**



**N. Ananth**  
**19ME1A0359**  
**Final Year**



**Mr. N. Sai Charan**  
**20ME1A0332**  
**Third Year**



**Mr. SK. Imran Basha**  
**20ME1A0344**  
**Third Year**



**Mr. Mohammed Shafi**  
**22ME5A0312**  
**Second Year**



**Mr. P. Vijay Babu**  
**21ME1A0318**  
**Second Year**



**Mr. K. Satish Babu**  
**22ME1A0315**  
**First Year**



**Mr. B. Gnaneswar**  
**22ME1A0304**  
**First Year**